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SEP 27 2006

**Please amend the claims as follows:**

Please amend claim 1 as follows:

1. A process for producing a non-aqueous sol-gel spin-on glass material comprising a hybrid glass/polymer material, by reacting an alkyl ~~or dialkyl~~ substituted trialkoxysilane or dialkyl substituted dialkoxysilane with a silane diol, wherein said alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane with the silane diol is carried out in a non-aqueous medium in the presence of a catalyst, wherein the catalyst is selected from: a) a tin catalyst or b) a dibutyltin diluarate, titanium isopropoxide, acetic acid or trifluoroacetic acid catalyst.

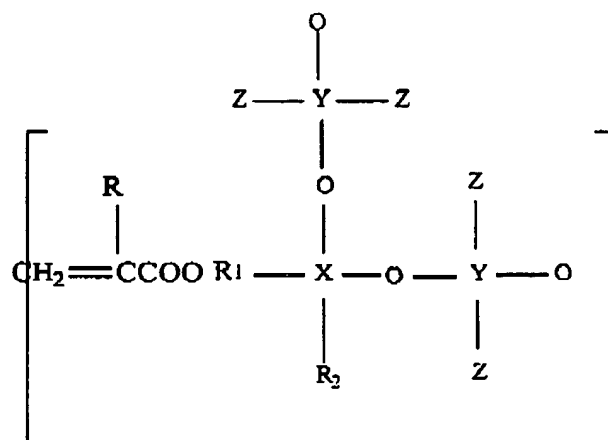
Please cancel claim 4.

Please cancel claim 6.

Please cancel claims 13-17.

Please amend claim 18 as follows:

18. A non-aqueous sol-gel spin-on glass material comprising a hybrid glass/polymer material containing a phosphor dopant, which comprises YAG base phosphor or moisture sensitive phosphor nano-particles or an organic material selected from organic dyes or metal complexes, said sol-gel spin-on-glass material selected from the group having the following formulas:

**Formula I**

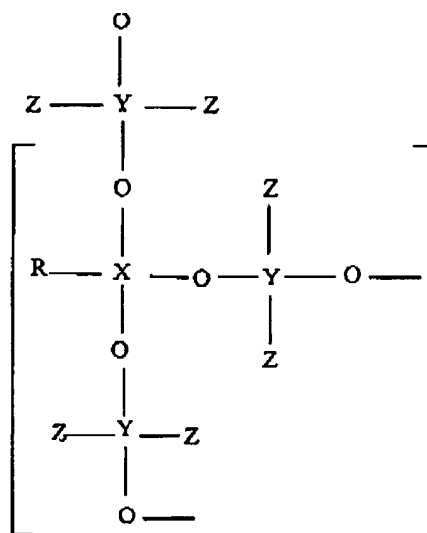
Where R = Hydrogen, C<sub>1</sub>-C<sub>8</sub> Alkyl, Halogenated C<sub>1</sub>-C<sub>8</sub> Alkyl or Glycidylalkyl

R<sub>1</sub> = Ethyl, Propyl, another C<sub>1</sub>-C<sub>8</sub> Alkyl, Halogenated C<sub>1</sub>-C<sub>8</sub> Alkyl, Phenyl, or Halogenated Phenyl

R<sub>2</sub> = Methyl, Ethyl or another C<sub>1</sub>-C<sub>8</sub> Alkyl, Methyl, Ethyl

X, Y = Si, Ge, Ti or Sn

Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

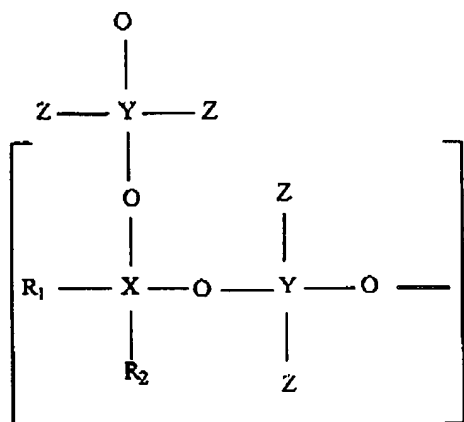
**Formula II**

Where R = Alkyl (C<sub>1</sub>-C<sub>8</sub>), Phenyl, Substituted Phenyl, Methacryloxyalkyl, Acryloxyalkyl or Glycidylalkyl

R<sub>1</sub> = Phenyl or Substituted Phenyl, Ethyl, Propyl or another C<sub>1</sub> to C<sub>8</sub> Alkyl, or Trifluoroalkyl

X, Y = Si, Ti, Ge, or Sn

Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

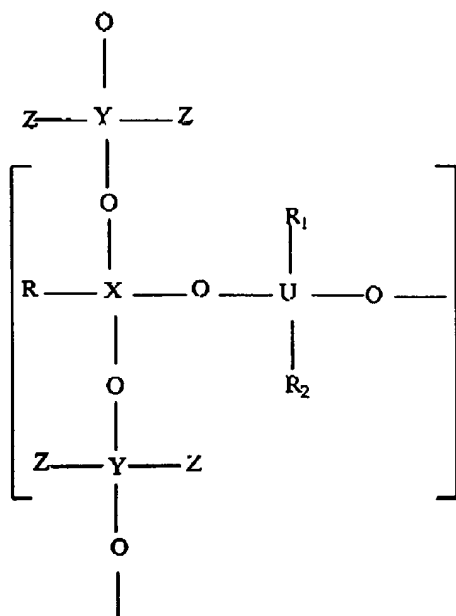
**Formula III**

Where  $\text{R}_1$  = Phenyl or Substituted Phenyl, Ethyl, Propyl or another  $\text{C}_1$  to  $\text{C}_8$  Alkyl, or Trifluoroalkyl ~~Trifluoropropyl~~

$\text{R}_2$  = Methyl, Ethyl or another  $\text{C}_1$  to  $\text{C}_8$  Alkyl

$\text{X}, \text{Y}$  = Si, Ge, Ti, or Sn

$\text{Z}$  = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

**Formula IV**

Where  $\text{R}$  = Alkyl ( $\text{C}_1$  -  $\text{C}_8$ ), Phenyl, Substituted Phenyl, Methacryloxyalkyl, Acryloxyalkyl or Glycidylalkyl

$\text{R}_1$  = Phenyl or Substituted Phenyl, Ethyl, Propyl or another  $\text{C}_1$  to  $\text{C}_8$  Alkyl, Phenyl or Trifluoroalkyl

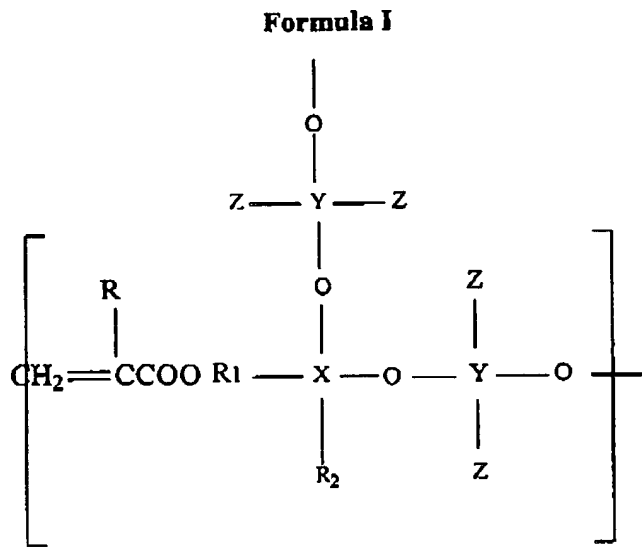
$\text{R}_2$  = Alkyl, Methyl, Ethyl or another  $\text{C}_1$  to  $\text{C}_8$  Alkyl or Phenyl

$\text{X}, \text{U}, \text{Y}$  = Si, Ge, Ti, or Sn

$\text{Z}$  = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Please amend claim 19 as follows:

19. The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:



Where R = Hydrogen, C<sub>1</sub>-C<sub>8</sub> Alkyl, Halogenated C<sub>1</sub>-C<sub>8</sub> Alkyl or Glycidylalkyl

R<sub>1</sub> = Ethyl, Propyl, another C<sub>1</sub>-C<sub>8</sub> Alkyl, Halogenated C<sub>1</sub>-C<sub>8</sub> Alkyl, Phenyl or Halogenated Phenyl

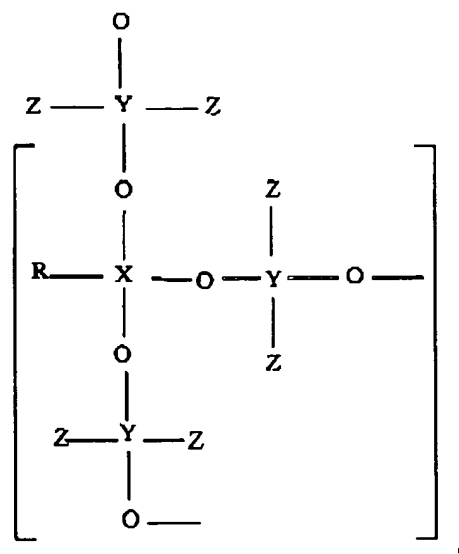
R<sub>2</sub> = Methyl, Ethyl or another C<sub>1</sub>-C<sub>8</sub> Alkyl

X, Y = Si, Ge, Ti or Sn

Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Please amend claim 20 as follows:

20. The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

**Formula II**

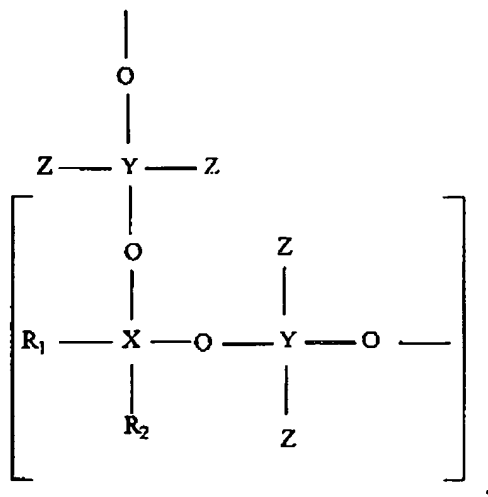
Where R = Alkyl (C<sub>1</sub>-C<sub>8</sub>), Phenyl, Substituted Phenyl

X, Y = Si, Ti, Ge or Sn

Z = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Please amend claim 21 as follows:

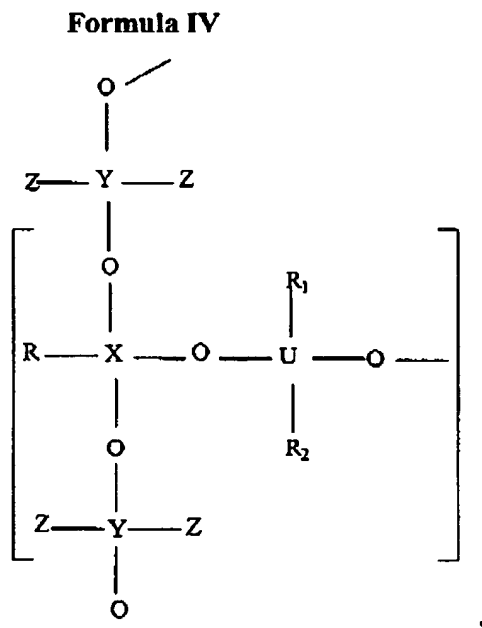
21. The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:

**Formula III**

Where  $R_1$  = Phenyl, Ethyl, Propyl, Trifluoropropyl  
 $R_2$  = Methyl, Ethyl  
 $X, Y$  = Si, Ge, Ti or Sn  
 $Z$  = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Please amend claim 22 as follows:

22. The non-aqueous sol-gel spin-on glass material of claim 18, having the following formula:



Where  $R$  = Alkyl ( $C_1$ ,  $C_6$ ), Phenyl, Substituted Phenyl  
 $R_1$  = Alkyl, Phenyl  
 $R_2$  = Alkyl, Phenyl  
 $X, U, Y$  = Si, Ge, Ti or Sn  
 $Z$  = Alkyl, Substituted Alkyl, Phenyl, Substituted Phenyl

Please cancel claims 23, 24 and duplicate claim 24 (Should have been number 25).

Please amend claim 25 as follows:

25. 26. The non-aqueous sol-gel spin-on glass material of claim ~~17~~ 18, further comprising a UV light blocking material and/or an oxygen scavenger.

Please amend claim 26 to as follows:

26. 27. The non-aqueous sol-gel spin-on glass material of claim ~~17~~ 18, further comprising a light-scattering material.

Please withdraw claims 28-33 (previously numbered 27-32), as drawn to a non-elected invention and amend these claims as follows:

~~27.~~ 28. A process for patterning the non-aqueous sol-gel spin-on glass material of claim 17 comprising: a) coating a substrate with said material followed by soft baking at 110°C (1hr), 120°C (1-2 hr); b) exposing the coated substrate of step a) to UV illumination in a desired pattern; c) post-exposure baking the coated substrate of step b) at a temperature from 100°C to 120°C for 30 to 60 minutes; d) cooling the coated substrate of step c) to room temperature; e) removing the non-exposed areas of the coating on the coated substrate of step d); f) drying the coated substrate of step e); g) hard baking the coated substrate of step f) at a temperature from 120 °C and 150 °C for 1 to 3 hours.

~~28.~~ 29. The process of claim ~~27~~ 28, wherein the non-exposed areas of the coating on the coated substrate are removed by developing in a suitable organic solvent.

~~29.~~ 30. The process of claim ~~28~~ 29, wherein in step e) the organic solvent is tetrahydrofuran, methylethylketone, acetone, n-propylacetate, or mixture of these solvents.

~~30.~~ 31. The process of claim ~~27~~ 28, wherein in step f) the coated substrate is dried by flushing with a non-reactive gas.

~~31.~~ 32. The process of claim ~~27~~ 28, wherein in step a) the substrate is glass, quartz, sapphire, silicon, a metalized substrate or a polymeric film.

~~32.~~ 33. The process of claim ~~27~~ 28, wherein in step a) the coating is carried out by spin coating, dip coating, spray coating or doctor blade coating.

Please add new claims 34, 35 and 36 as follows:

34. The non-aqueous sol-gel spin-on glass material of claim 18, wherein the phosphor dopant comprises YAG base phosphor or moisture sensitive phosphor nano-particles.

35. A process for producing the non-aqueous sol-gel spin-on glass material of claim 18, the process comprising reacting an alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane with a silane diol, wherein said alkyl group has from 1 to 8 carbon atoms, wherein the reaction of the alkyl substituted trialkoxysilane or dialkyl substituted dialkoxysilane silane with the silane diol is carried out in the presence of a catalyst, the process further comprising adding to said sol-gel spin-on glass material a phosphor dopant, which comprises YAG base phosphor or moisture sensitive phosphor nano-particles or an organic material selected from organic dyes or metal complexes.

36. The process of claim 35, wherein the phosphor dopant comprises YAG base phosphor or moisture sensitive phosphor nano-particles.